



U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Species Account
PALMATE-BRACTED BIRD'S-BEAK
Cordylanthus palmatus



CLASSIFICATION: Endangered
Federal Register Notice 51:23765; July 1, 1986
http://ecos.fws.gov/docs/federal_register/fr1153.pdf
(540 KB)

STATE LISTING STATUS AND CNPS CODE:
This species was listed as endangered by the California Department of Fish and Game in May 1984. The California Native Plant Society has placed it on List 1B (rare or endangered throughout its range).

CRITICAL HABITAT: None designated

RECOVERY PLAN: Recovery Plan for Upland Species of the San Joaquin Valley, California 1998
http://ecos.fws.gov/docs/recovery_plan/980930a.pdf

5-YEAR REVIEW: Completed June 2009. No change.
http://ecos.fws.gov/docs/five_year_review/doc2628.pdf

DESCRIPTION:



Palmate-Bracted Bird's Beak
US Fish and Wildlife Service photo



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Palmate-bracted bird's-beak is an annual herb in the broomrape family (Orobanchaceae). The plants are 30 centimeters (12 inches) tall and highly branched.

Leaves and highly-branched stems are grayish green and sometimes are covered with salt crystals excreted by glandular hairs.

Small pale whitish flowers, up to 2.5 centimeters (1 inch) long, are arranged in dense clusters (spikes) and are densely surrounded by herbaceous leaf-like bracts. Seedlings grow in late March or April, while flowers bloom from late spring through summer.

In all *Cordylanthus* species, the corolla (the set of petals) is club-shaped and is divided lengthwise into two lips (groups of fused petals that differ in appearance). The upper lip is hooked like a bird's beak and the lower lip is inflated like a pouch. The flowers are nearly hidden by bracts, which are leaf-like structures.

In palmate-bracted bird's-beak, the outer bracts are green. The inner bracts are lavender and deeply divided into finger-like segments (i.e., palmate). The corolla is hairy, whitish to lavender on the sides, and has fine purple stripes on the lower lip.

Palmate-bracted bird's-beak differs from the closely-related hispid bird's-beak (*C. mollis* ssp. *hispidus*) in that the latter has bristly hairs longer than 1 millimeter (0.04 inch), whitish to yellowish flowers, and lacks crests on the seeds. Fleshy bird's-beak is distinguished from palmate-bracted bird's-beak by its branching pattern and hair characteristics. See Hickman (1993) in General Information about California Plants, below, for a detailed description of these species.

Like other members of this family, palmate-bracted bird's-beak is partially parasitic on the roots of other plants. The palmate-bracted bird's beak is a hemi-parasite (it manufactures its own food but obtains water and nutrients from the roots of other plants).

The pollinators of palmate-bracted bird's beak include 3 species of bumble bees (*Bombus californicus*, *B. vosnesenskii*, and *B. occidentalis*), sweat bees (family *Lasioglossum*), semi-social and solitary bees (families *Halictidae*, *Anthophoridae*, *Magachilidae*, and *Colletidae*), and bee flies (family *Bombyliidae*), with the western bumble bee (*B. vosnesenskii*) and sweat bees as the most common visitors to the flowers of palmate-bracted bird's beak.

DISTRIBUTION:

Historically, the species is known from scattered locations in the Sacramento and San Joaquin Valleys (Bittman 1985, 1986; Center for Conservation Biology 1991, 1992, 1993, 1994). Saline-alkali soils and alkali sink scrub habitats were historically rare in central California and have been greatly reduced in size and number. The rarity of saline-alkali soils with natural vegetation and the intensive agricultural and urban development within the species' range make the likelihood of finding additional populations remote.

U.S. Geological Survey 7.5 Minute Quads: Kerman (359A)* 3612061, Tranquility (360A) 3612063, Firebaugh NE (381A)* 3612083, Poso Farm (381B) 3612084, Altamont (445B) 3712166, Livermore (446A) 3712167, Stockton West (462A)* 3712183, Grays Bend (513B) 3812166, Grimes (545C)* 3912118, Colusa (546A) 3912221, Arbuckle (546D) 3912211, Logandale (562B) 3912242, Maxwell (562C) 3912232, Moulton Weir (562D) 3912231 (* Presumed extirpated)

THREATS:

Urban expansion, changes in the hydrologic regime, random or catastrophic events, road maintenance, unauthorized fill of wetlands, encroachment by exotic plants, resulting in competition with palmate-bracted bird's-beak individuals as well as habitat modification, offroad vehicle use, and livestock wallowing in seasonal ponds.

Upland Plants of the San Joaquin Valley

Loss and degradation of natural communities due to agriculture, urbanization, livestock grazing, water impoundment and diversion, historical predator and pest control, and other human activities have jeopardized nearly all the unique biota of the San Joaquin Valley below the woodland belts, and are the major causes of endangerment of the state and federally listed species.

REFERENCES FOR ADDITIONAL INFORMATION:

General references about California plants

www.fws.gov/sacramento/es/plant_spp_accts/plant_references.htm

For more photos, see CalPhotos <http://calphotos.berkeley.edu/>.

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